

**BY ORDER OF THE COMMANDER
910 AIRLIFT WING**

910 AIRLIFT WING INSTRUCTION 21-102

10 SEPTEMBER 2015



Maintenance

**FOREIGN OBJECT DAMAGE (FOD)
CONTROL**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 910 MXG/MXQ

Certified by: 910 MXG/CC
(Colonel David Post)

Supersedes: 910AWI21-102, 26 March 2010

Pages: 6

This instruction implements Air Force Instruction (AFI) 21-101, *Aircraft and Equipment Maintenance Management*; AFI 91-204, *Safety Investigations Reports* and 910 Airlift Wing (910AW) Plan 91-212, *Bird-Aircraft Strike Hazard Plan (BASH)*. This instruction establishes procedures and outlines precautionary measures for ensuring effective prevention of Foreign Object Damage (FOD) to assigned aircraft and equipment. It applies to all personnel assigned to the Maintenance organization and designed to ensure FOD is identified and removed. Refer recommended changes and questions about this publication through the appropriate chain of command, to the Office of Primary Responsibility (OPR) using the AF IMT 847, *Recommendation for Change of Publication* directly to the 910 MXG/MXQ at Youngstown ARS. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*. NOTE: Any document, form, or record created within this process that identifies any nature of Personal Identification Information (PII), must do so within the scope, limitations, and protections of AFI 33-332, *The Air Force Privacy Act and Civil Liberties Program*, and Title 5, United States Code (U.S.C.) 552a as amended, *The Privacy Act of 1974*.

SUMMARY OF CHANGES

This revision incorporates numerous grammatical changes and removes the requirement for FOD shakers. It also establishes and implements the 910MXG “Golden Bolt” program.

1. Definition. Any damage to aerospace equipment by an external foreign object which may or may not degrade the required safety or operational characteristics of the equipment.

2. Procedures.

2.1. FOD Containers.

2.1.1. Supervisors are responsible to ensure that FOD containers are available in all work areas and are emptied daily.

2.2. Flight Line Vehicles.

2.2.1. Vehicle operators will ensure assigned vehicles operating on the flight line and adjacent ramps and roadways are frequently inspected for foreign objects, loose hardware, and tire trapped objects. FOD containers will be checked and emptied on a daily basis. Vehicles with magnetic bars will also be checked on a daily basis and any items picked up will be discarded.

2.3. Aircraft Parking Areas.

2.3.1. The aircraft crew chiefs must ensure that the areas around their assigned aircraft are clean and free of foreign objects. An enhanced housekeeping program around the aircraft is mandatory to control potential hazards.

2.4. Use of Protective Plugs and Covers.

2.4.1. Protective plugs and covers must be installed in the aircraft as prescribed by technical data at all times when aircraft are parked. Upon removal of the protective covers, an inspection of intakes and exhaust must be accomplished and annotated IAW prescribed technical order on the aircraft AFTO 781A Form, Maintenance Discrepancy and Work Document. The entry must be a RED "X" symbol and only cleared by a qualified technician prior to release of the aircraft to the aircrew. (Stamp established)

2.5. Intake Inspections.

2.5.1. Whenever maintenance is performed in or around the air intake section of an installed engine, an entry will be made in the AFTO 781A Form, *Maintenance Discrepancy and Work Document*, stating "Inspection due on (specific position) engine air inlet section after completion of maintenance action". The entry must be a RED "X" symbol and only cleared by a qualified inspector, prior to engine operation.

2.6. Throttle quadrant covers must be installed without delay after each flight and remain in place while on the ground.

2.7. Check for missing hardware e.g. such as streamers, attaching cables, etc. on aircraft Dash-21 equipment.

2.8. Cleaning Ramps and Surface Areas.

2.8.1. Aircraft parking ramps, taxiways, and access roads will be cleaned as frequently as required to remove FOD. Thorough cleaning will be accomplished using the mobile vacuum sweeper and hand policing. Sweeper requests are made through Maintenance Operations Center (MOC) as required. FOD walks are normally accomplished on UTA's and/or Friday mornings when weather/conditions permit.

2.9. The Composite Tool Kit (CTK) program is everyone's responsibility to ensure tools are inventoried prior to and after the job has been completed. Aircrew must have accountability of the equipment they possess. Refer to the CTK portion of AFI 21-101 and 910AWI 21-109.

2.10. Industrial shop rags are controlled items, accountability is mandatory. Refer to 910AWI 21-109, Composite Tool Kit (CTK) for accountability procedures.

2.11. Wearing of loose clothing and/or articles around engine/equipment intakes is prohibited. The wear of clothing on the flight line must be consistent with FOD prevention in mind. Personnel will pay close attention to straps, buckles, quick release clips and accountable tool pouches to ensure they are properly secured to their clothing, belts, back packs, etc...in order to prevent entanglement during working operations. At no time will hats be permitted to be worn within the areas of operating aircraft engines to include auxiliary power units of the aircraft. Wigs, hairpieces, metal hair fasteners, earrings or other jewelry which may fall off without notice are not permitted to be worn on the flight line. Further, AFRCI 21-101 Sup 1 states that jewelry is not permitted on the flight line or in industrial areas with exception to watches unless prohibited by technical guidance or AFOSH Standards.

2.12. Individuals will clean up after themselves and place all FOD in containers. Personnel performing the task for hardware control must use parts bags and attach the bag to the item. For items where parts bags are not feasible to use, the Flight will create a specific hardware control system to account for hardware.

2.13. In the event an item is lost (e.g. tool, personal item, component from an aircraft, etc), a RED X discrepancy will be input into the AFTO 781A identifying what has been lost.

2.13.1. A thorough search will be conducted. See AFI 21-101 for impound procedures if required.

2.13.2. The RED X will be signed off in accordance with 00-20-1 after item is found or when search has been exhausted. The MXG/CC and QA will be consulted before signing off RED X discrepancies, where the item is not found.

3. Golden Bolt.

3.1. The WG/CV authorizes the implementation of a Golden Bolt program and appoints the QA office to run the program. This is an Incentive Program to identify Superior Performers during FOD walks.

3.2. The QA office will maintain the Bolt(s) used for this program and will ensure the Bolt(s) are identified and loaded into their TC Max program.

4. Bird Strike Procedures.

4.1. Flight line or air crew personnel will notify MOC of bird strikes.

4.2. MOC will then contact MXQ for investigation.

4.3. MXQ will inform Base Safety Office (910AW/SE) of the bird strike for possible FOD damage to the aircraft. Upon completion of the investigation, MXQ will take specimens (feathers), if any remains are identifiable, to the Base Safety Office.

5. Training Requirements.

5.1. All personnel will receive FOD awareness training upon initial assignment by the supervisor. Work center supervisors will ensure that each individual receives the necessary training and briefing, to ensure they understand the importance of FOD detection and removal. Review the FOD program booklet and other informational data that is available.

6. Investigation and Reporting of FOD.

6.1. Refer to AFI 21-101, for FOD investigation, policies, and reporting procedures.

6.2. All aircraft sustaining FOD damage from an unknown cause will follow procedures as outlined in 910 AWI 21-105, *Impoundment Procedures*.

JAMES D. DIGNAN, Colonel, USAFR
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 21-101 – *Aircraft and Equipment Maintenance Management*, 21 May 2015

AFMAN 33-363 - *Management of Records*, 1 Mar 2008

AFI 91-204 – *Safety Investigations Reports*, 12 Feb 2014

AFPAM 91-212 – *Bird/Wildlife Aircraft Strike Hazard (BASH) Program*, 1 Feb 2004

910AW Plan 91-212 – *Bird-Aircraft Strike Hazard Plan (BASH)*, current plan

Adopted Forms

AF Form 847, *Recommendation For Change of Publication*

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

Abbreviations and Acronyms

AF—Air Force

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFRC—Air Force Reserve Command

AFRCI—Air Force Reserve Command Instruction

AFRIMS—Air Force Records Information Management System

BASH—Bird/Wildlife Aircraft Strike Hazard program

CCV—(910) Airlift Wing Vice Commander

CTK—Composite Tool Kit

FOD—Foreign Object Damage

FODPC—Foreign Object Damage Prevention Committee

MOC—Maintenance Operations Center

MOI—Maintenance Operating Instruction

MXG—(910) Maintenance Group

MXQ—(910) Maintenance Quality Assurance

NCO—Non-Commissioned Officer

QA—Quality Assurance Office

RDS—Records Disposition Schedule

SE—(910AW/SE) Base Safety Office

SUP—Supplement

UTA—Unit Training Assembly